VIII. Control Area Services

This chapter details the processes involved in scheduling and settlement of transmission services. It includes information on services, charges, payments and outages. Many of these processes are subject to the Open Access Transmission Tariff (OATT) processes already in place.

A. The Role of the Control Area Operator and Transmission Provider

ComEd, as a control area operator and transmission provider, has a number of responsibilities. These are as follows:

1. Balancing Generation Resources and Other Duties. The fundamental role of a control area operator is to balance generation resources and load in order to maintain frequency and reliability. In order to perform these functions, the control area operator must have accurate real-time information regarding generation outputs and interchange. Automatic generation control is used to automatically compensate for differences between load and generation. In addition, the control area operator must ensure that adequate amounts of generation are available as reserves to cover unforeseen contingencies, such as the loss of a generating unit. ComEd currently functions as the control area operator within its service territory.

2. Transmission Provider. ComEd also currently functions as a transmission provider. In this role, ComEd monitors the status of key transmission facilities in order to predict and prevent overloaded or unstable conditions. The transmission system is the high-voltage system used to transport power across the control area to points of delivery onto the distribution system. As a transmission provider, ComEd must administer the use of its transmission system in accordance with an OATT which is regulated by the Federal Energy Regulatory Commission (FERC).

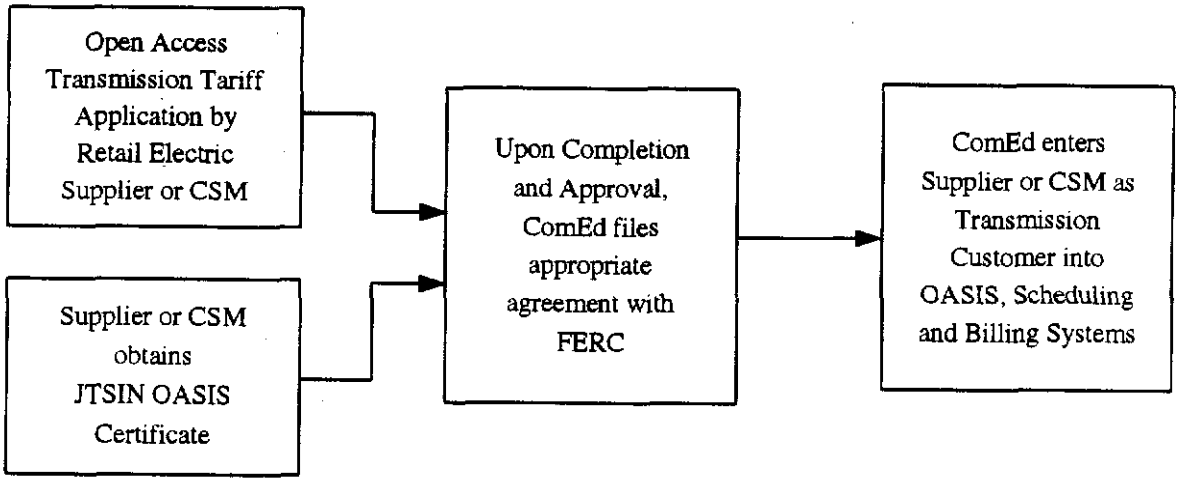
ComEd is a member of the Midwest Independent System Operator (ISO). At some time in the future, the Midwest ISO will become the provider of transmission services for ComEd's transmission system. At such time, each Retail Electric Supplier will be required to become a Midwest ISO Transmission Customer.

3. **Ancillary Transmission Services.** Ancillary transmission services are those services that the FERC has determined are necessary to support the movement of power and energy across the transmission system while maintaining reliable operation. Ancillary transmission services now provided by the control area operator include six services. These are:

- Scheduling, system control and dispatch service
- Reactive supply and voltage control from generation sources service
- Regulation and frequency response service
- Energy imbalance service
- Operating reserve – spinning reserve service
- Operating reserve – supplemental reserve service

As control area operator, ComEd is presently required by FERC to provide the first two services at all times and to offer the last four services, as set forth in ComEd's OATT.

B. Necessary Registration.



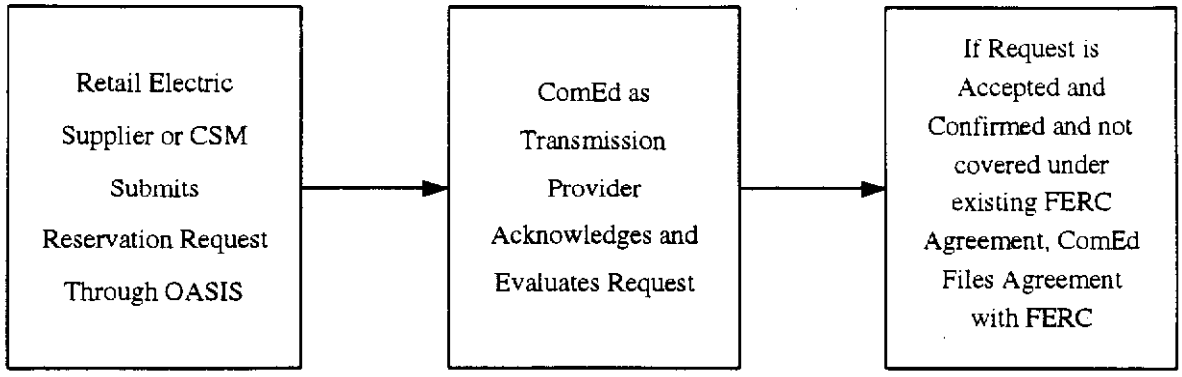
1. **Transmission Customer Registration.** Eligible non-residential retail customers are also eligible customers under ComEd's OATT. In order to secure transmission services, including ancillary transmission services, a Retail Electric Supplier or a Customer Self-Manager must be a Transmission Customer as required by ComEd's OATT. To establish a service agreement under ComEd's OATT, Retail Electric Suppliers or Customer Self-Managers should contact their account manager.

2. **OASIS Registration**. In order to secure transmission services including ancillary transmission services, Retail Electric Suppliers or Customer Self-Managers must obtain access to the Joint Transmission System Information Network Open Access Same-time Information System (JTSIN OASIS). Every user of the JTSIN OASIS must register with the JTSIN OASIS vendor TradeWave to obtain an on-line registration certificate. This certificate serves as the user's "log-on" to the system. The certificate is unique to each individual user and allows the user to access any of the JTSIN OASIS Nodes.

Additional information about OASIS registration, monthly access fees and the registration form is available via the internet at a site that currently has the following Uniform Resource Locators (URL): http://ca1.tradewave.com/oasis.html and on the PowerPath web site. Further directions on downloading and installing the necessary security software are also currently available at this registration address.

3. **Transmission Services Agent.** Retail Electric Suppliers or Customer Self-Managers may employ a qualified transmission scheduling entity to secure transmission and ancillary transmission services as an agent for, and in the name of the Customer Self-Manager or Retail Electric Supplier. The use of an agent does not relieve the supplier or CSM of any obligation under law, tariff or contract.

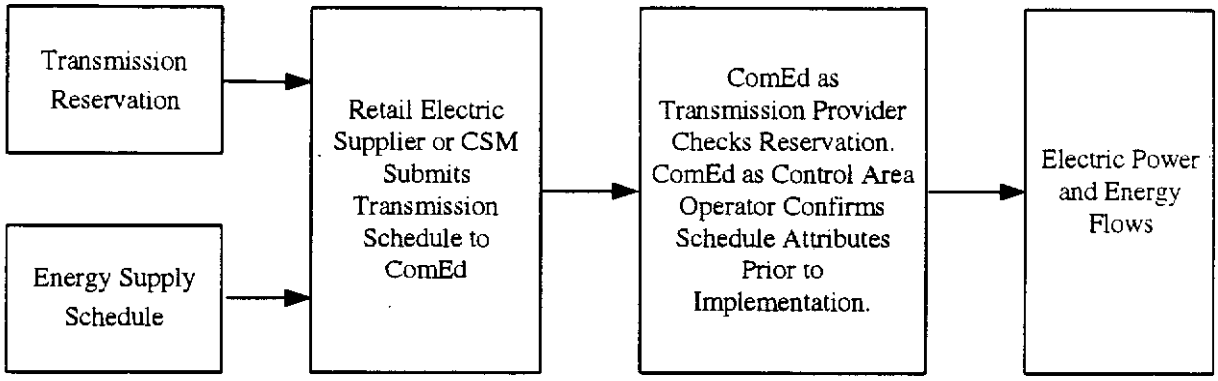
C. Requests for Transmission and Ancillary Transmission Services



1. Timelines. All requests for transmission services and ancillary transmission services should be received before 2 p.m. the day preceding the commencement of service must be made by the OATT Transmission Customer on the Open Access Same-Time Information System (OASIS). Off-OASIS requests by telephone and facsimile will be accepted if the OASIS is not functioning and no customers can submit service requests through OASIS. In addition, Off-OASIS requests made after 2 p.m. the day preceding the commencement of service will be accepted via telephone and facsimile if the customer's computer or Internet connection is not functioning. A signed document stating the reason for the off-OASIS submittal must be faxed to the Transmission Service Coordinator prior to the request for service.

2. Documentation. Upon receipt of the request for transmission service, ComEd will make a determination of Available Transfer Capability (ATC) to determine if the transaction is feasible. Requests for transmission service which are accepted by ComEd must be confirmed by the Transmission Customer or the request is considered withdrawn and the ATC can be reassigned to another user. Transmission Customers seeking information on time limits for submitting and confirming requests, loss repayment, changing service type or changing resources can obtain more detailed information on the PowerPath web site and in ComEd's OATT.

D. Scheduling Requirements



Retail Electric Suppliers and Customer Self-Managers must schedule and provide generation matching the end-use customer's actual loads plus applicable transmission and distribution losses at all times. Transmission losses must be calculated pursuant to the OATT. Distribution losses must be calculated according to the applicable delivery services tariff. Scheduling requirements for network transmission service are stipulated in the network service agreement according to ComEd's OATT. Scheduling requirements for point-to-point service are delineated in ComEd's OATT. Further information regarding scheduling can be found on the PowerPath web site, and in NERC Policy 3, entitled Interchange. All of NERC's Operating Policies are available for download at a web site currently with the URL: www.nerc.com.

E. Determination of Non-Residential Customer Usage

1. **Metering**. A non-residential retail customer's hourly usage is determined by interval meters (no less than hourly increments) or by load profiling. Any customer who has a peak demand in excess of 400 kilowatts and chooses to take delivery services from ComEd is required to be interval metered. Hourly electricity usage is used to calculate control area service charges such as energy imbalance.

2. **Settlement Load Profiling**. ComEd creates settlement load profiles for seven customer classifications used in ComEd's Rate RCDS:

- Watt-hour only
- From 0 kilowatts up to and including 25 kilowatts
- From more than 25 kilowatts up to and including 100 kilowatts
- From more than 100 kilowatts up to and including 400 kilowatts
- Fixture-included lighting
- Dusk-to-dawn lighting
- All other lighting

Dynamic load modeling is the technique used by ComEd to estimate the hourly usage of retail customers without interval metering, i.e., delivery service customers with a peak demand equal to or less than 400 kilowatts. This technique uses profiles generated by defined and disclosed algorithms for each season and class. Independent variables include factors such as weather conditions and day-of-the-week that can be forecasted by a RES and objectively determined after the fact.

ComEd has separated the less than or equal to 400 kilowatt customers into four classes. These four classes are the "Watt-Hour Only" class (i.e., customers having only watt-hour meters), those customers having demand less than or equal to 25 kilowatts, those customers having demand greater than 25 kilowatts and less than or equal to 100 kilowatts, and those customers having demand greater than 100 kilowatts and less than or equal to 400 kilowatts. Algorithms are produced for each of these four classes and supplied to the RES who may use these algorithms to forecast loads for scheduling purposes. These algorithms are used for the settlement of energy imbalances for a RES who has customers without interval metering in any of these four classes.

ComEd designs the algorithms in a manner appropriate for each independent variable and will update them as required (but no more frequently than annually for each season). ComEd will provide each RES with reasonable advance notice of any changes to the algorithms.

The settlement profiles are available on the ComEd PowerPath web site (*http://www.comedpowerpath.com*).

3. **Distribution System Losses**. Distribution system losses result from the consumption of electric power and energy by the distribution system. Retail Electric Suppliers and Customer Self-Managers are required to supply these losses as a part of their retail load. ComEd calculates distribution system losses by applying the applicable distribution system loss factor to a customer's hourly electricity usage and billing appropriately.

4. **Aggregation**. Control area service charges are computed for each Customer Self-Manager and for the aggregated usage of each Retail Electric Supplier as described below. The hourly electricity usage of each retail customer served by a single Retail Electric Supplier, including distribution system losses, is aggregated to obtain the hourly electrical usage of that Retail Electric Supplier. A Customer Self-Manager's usage is the aggregated hourly electrical usage of the customer's sites, including distribution system losses.

F. Calculation of Control Area and Transmission Service Charges

1. **Transmission Service**. Transmission Customers may obtain either Network Integration Transmission Service or Point-to-Point Transmission Service. ComEd's OATT details both methodologies for computing charges.

2. **Network**. Network Integration Transmission Service allows Transmission Customers to utilize their designated network resources (as well as other non-designated generation resources) to serve their network load located in ComEd's Control Area. Charges for Network Integration Transmission Service are based on usage, and are detailed in ComEd's OATT.

3. **Point-to-Point** Point-to-Point Transmission Service allows Transmission Customers to reserve transmission capacity from a designated point of receipt to a designated point of delivery on ComEd's transmission system. Point-to-Point Transmission Service can be reserved on a firm basis in daily, weekly, monthly, and yearly increments and on a non-firm basis in hourly, daily, weekly, and monthly increments. Charges for Point-to-Point Transmission Service are based on the reserved transmission capacity, and are detailed in Schedules 7 and 8 of ComEd's OATT. Current prices are posted on ComEd's OASIS.

4. **Exceeded Point-to-Point** A Point-to-Point Transmission Service reservation must cover the maximum use of transmission capacity in any hour for which the reservation is valid. If this capacity amount is exceeded, an Exceeded Point-to-Point Reservation charge will be assessed. ComEd's OATT details the charges for exceeding both firm and non-firm Point-to-Point reservations.

5. **Ancillary Transmission Services**. The Transmission Customer is currently required to procure from the transmission provider the following two services: (1) Scheduling, System Control and Dispatch Service and (2) Reactive Supply and Voltage Control from Generation Sources Service.

For load served within ComEd's Control Area, ComEd as a transmission provider is currently required to offer the following under its OATT:

- Regulation and Frequency Response Service
- Energy Imbalance Service
- Operating Reserve – Spinning Reserve Service
- Operating Reserve – Supplemental Reserve Service

The Retail Electric Supplier or Customer Self-Manager serving load within ComEd's Control Area must arrange for these ancillary transmission services, whether from the transmission provider, from a third party, or by self-supply. If the Transmission Customer declines ComEd's offer of these four ancillary transmission services, it must demonstrate that it has arranged for the services from another source. Charges for ancillary transmission services are detailed in Schedules 1-6 of ComEd's OATT.

- **Energy Imbalance.** Energy imbalance service is provided when a difference occurs between scheduled energy usage and the actual usage of energy over a single hour. Energy schedules and actual usage for loads served by Network Integration Transmission Service and Point-to-Point Transmission Service will be calculated as described above. Details of the methodology to compute charges for energy imbalance are found in Schedules 4 and 4A and, if accepted by FERC, Schedules 4B and 10 of ComEd's OATT. Included in Schedule 4a are details of ComEd's retail energy imbalance trading mechanism.
- **Scheduling, System Control and Dispatch.** Scheduling, system control and dispatch service are required to schedule the movement of power through, out of, within, or into ComEd's Control Area. As noted above, the Transmission Customer is required to purchase this service from ComEd. Details of the methodology to compute charges for scheduling, system control and dispatch service are found in Schedule 1 of ComEd's OATT.
- **Reactive Supply and Voltage Control from Generation Sources.** Reactive supply and voltage control from Generation Sources Service must be provided for each transaction on ComEd's transmission system in order to maintain voltages within

acceptable limits. As noted above, the Transmission Customer is required to purchase this service from ComEd. Details of the methodology to compute charges for reactive supply and voltage control from Generation Sources Service are found in Schedule 2 of ComEd's OATT.

- **Regulation and Frequency Response Service.** Regulation and frequency response service is necessary to provide for the continuous balancing of generation and interchange resources with load in order to maintain scheduled interconnection frequency. The Transmission Customer serving load within ComEd's Control Area must either purchase this service from ComEd or make alternative comparable arrangements to satisfy its obligation. Details of the methodology to compute charges for regulation and frequency response service are found in Schedule 3 of ComEd's OATT.
- **Operating Reserve – Spinning Reserve Service.** Spinning reserve service is needed to serve load immediately in the event of a loss of a generating unit. Spinning reserve service is provided by generating capacity that is on-line and synchronized to the transmission system, ready to serve additional demand and which can be fully applied in 10 minutes. The Transmission Customer serving load within ComEd's Control Area must either purchase this service from ComEd or make alternative comparable arrangements to satisfy its obligation. Details of the methodology to compute charges for operating reserve – spinning reserve service are found in Schedule 5 of ComEd's OATT.
- **Operating Reserve – Supplemental Reserve Service.** Supplemental reserve service is also needed to serve load in the event of a loss of a generating unit; however, it is not synchronized to the transmission system. Supplemental reserve service may be provided by generating capacity that can serve demand within 10 minutes or by interruptible load which can be removed within 10 minutes. The Transmission Customer serving load within ComEd's Control Area must either purchase this service from ComEd or make alternative comparable arrangements to satisfy its

obligation. Details of the methodology to compute charges for operating reserve – supplemental reserve service are found in Schedule 6 of ComEd's OATT.

G. Transmission Services Billing

Separate bills are issued for transmission services to Customer Self-Managers for transmission services used by the CSM's and to Retail Electric Suppliers for transmission services used by the customers to whom they supply power and energy (See*Chapter 6* for details).

H. Credit Requirements

The OATT contains certain credit requirements. Retail Electric Suppliers and Customer Self-Managers are subject to these requirements.

I. Dispute Resolution

Dispute resolution procedures for any Transmission Customer having unresolved complaints or disputes related to transmission services or ancillary transmission services are detailed in Section 12 of ComEd's OATT.

J. Outage Information

Service interruptions to customers are usually due to interruptions on the distribution system. A Retail Electric Supplier or Customer Self-Manager may wish to modify their energy schedules which are submitted in whole megawatt increments, in the event of a distribution outage. On a supplier and CSM-accessible web page, ComEd endeavors to make available geographic boundaries of circuit interruptions on the distribution system to the extent that this information is available to ComEd. The Retail Electric Supplier or Customer Self-Manager will need to determine if an adjustment to their hourly schedules is required.